

Title (en)
AN EXPLOSION-PROOF MATERIAL AND A PREPARATION METHOD THEREOF

Title (de)
EXPLOSIONSSICHERES MATERIAL UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
MATÉRIAU ANTI-EXPLOSION ET PROCÉDÉ DE PRÉPARATION DE CELUI-CI

Publication
EP 2192054 B1 20170823 (EN)

Application
EP 07785213 A 20070731

Priority
CN 2007002299 W 20070731

Abstract (en)
[origin: EP2192054A1] The present invention provides an explosion-proof material which is composed of a high-porosity material sheet(11); With one side edge(12) of the material as center and along the direction perpendicular to it, the high-porosity material sheet (11) is rolled up into a multilayer material body(1); A skeleton(13) is inserted between any two adjacent layers of the multilayer high-porosity material(11) of the material body(1) to fix and support the material body(1) ; The present invention also provides a processing method for the explosion-proof material, including: firstly, cutting the open width raw material sheet so as to form a grid-form semi-finished material; Then, gradually expanding outward both sides of this grid-form semi-finished material into honeycomb structured high porosity material(11) ; then, with one side edge (12) of this high porosity material(11) as center, rolling up the material along the direction perpendicular to this side edge; last, in the process of rolling up said high porosity material (11), inserting the skeleton (13) between any two adjacent layer of the high porosity material(11), and cutting off the remaining material(11)to form the high-porosity multilayer high-porosity explosion-proof material. The present invention adopts skeleton to support the body of the high-porosity material, and thus it can effectively prevent the material body from collapsing and deforming. Featured by simple structure and easiness of processing, the present invention can effectively prevent explosion accident triggered by naked flame, static electricity, welding, gunshot, collision and faulty operation, thus the safety, environment friendliness and reliability of the storage-transport container is achieved.

IPC 8 full level
B65D 90/40 (2006.01); **A62C 3/06** (2006.01); **A62C 4/02** (2006.01); **B60K 15/03** (2006.01); **B60K 15/077** (2006.01); **B65D 90/32** (2006.01); **F17C 13/12** (2006.01)

CPC (source: EP US)
A62C 4/02 (2013.01 - EP US); **B65D 90/325** (2013.01 - EP US); **B60K 2015/03381** (2013.01 - EP US); **F17C 2260/042** (2013.01 - EP US); **Y10S 428/906** (2013.01 - EP US); **Y10T 29/49826** (2015.01 - EP US); **Y10T 428/12333** (2015.01 - EP US); **Y10T 428/24** (2015.01 - EP US)

Cited by
CN104276366A; ES2390438A1; WO2015005880A3

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 2192054 A1 20100602; **EP 2192054 A4 20150415**; **EP 2192054 B1 20170823**; CA 2694233 A1 20090205; CA 2694233 C 20120717; CN 101466620 A 20090624; CN 101466620 B 20110420; ES 2648981 T3 20180109; HK 1130745 A1 20100108; JP 2010535134 A 20101118; JP 5183739 B2 20130417; KR 101216700 B1 20121231; KR 20100049086 A 20100511; NZ 572051 A 20120525; RU 2007135294 A 20090327; RU 2426936 C2 20110820; TR 201718467 T4 20180621; US 2010233502 A1 20100916; US 8002136 B2 20110823; WO 2009015514 A1 20090205

DOCDB simple family (application)
EP 07785213 A 20070731; CA 2694233 A 20070731; CN 2007002299 W 20070731; CN 200780006738 A 20070731; ES 07785213 T 20070731; HK 09106701 A 20090722; JP 2010518472 A 20070731; KR 20107004168 A 20070731; NZ 57205107 A 20070731; RU 2007135294 A 20070924; TR 201718467 T 20070731; US 28034207 A 20070731